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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/931,763 | 08/20/2001 | Masanori Nakamura | 107318-00004 | 6959 |

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EXAMINER

GOFF II, JOHN L

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 03/13/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/931,763

Applicant(s)

NAKAMURA ET AL.

Examiner

John L. Goff

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/355,946.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 13 and 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gash (U.S. Patent 4,355,076) in view of the admitted prior art (Specification page 7).

Gash is directed to a method for dry laminating at least two plastic films. Gash teaches the method comprises contacting at least two plastic films wherein each film may have a different melting point, heating the films at a temperature in the range from ambient up to the melting temperature of the film having the lowest melting point to form a low peel strength composite (i.e. the films undergo a heat treatment wherein only the surface layers melt), and subsequently subjecting the composite to heat at an elevated temperature in the same range in order to form a high peel strength laminate (Column 1, lines 6-16). Gash teaches performing the heating using heated rolls, i.e. laminating under heat and pressure (Column 2, lines 39-41, 46-50, and 55-68). Gash further teaches the films may comprise polyolefin material and in particular oriented polyolefin material (Column 2, lines 25-27 and Column 3, lines 1-12). Gash is silent as to specifically disclosing that when the films comprise oriented polyolefin material they have an average coefficient of linear expansion not exceeding 5×10^{-5} ($^{\circ}\text{C}$) in the 20-80 $^{\circ}\text{C}$ temperature range. One of ordinary skill in the art at the time the invention was made would readily expect the oriented polyolefin films taught by Gash to have an average coefficient of linear expansion less than or equal to 5×10^{-5} ($^{\circ}\text{C}$) in the 20-80 $^{\circ}\text{C}$ temperature range in view of the teaching by the admitted prior art that it is unoriented polyolefin films that have average coefficients of linear expansion exceeding 5×10^{-5} ($^{\circ}\text{C}$) in the 20-80 $^{\circ}\text{C}$ temperature range.

The admitted prior art teaches that unoriented polyolefin films generally have an average coefficient of linear expansion that is greater than 5×10^{-5} ($^{\circ}\text{C}$) in the 20-80 $^{\circ}\text{C}$ temperature range (Specification page 7, lines 13-15).

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Regarding claims 16 and 18, one of ordinary skill in the art at the time the invention was made would readily expect the oriented polyolefin films taught by Gash to have the same melting point ranges following the first heat treatment as that currently claimed as the oriented polyolefin films taught by Gash are the same as those taught by applicant.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gash and the admitted prior art as applied in paragraph 4 above, and further in view of Ikenaga et al. (U.S. Patent 4,717,624).

Gash and the admitted prior art as applied above teach all of the limitations in claim 14 except for a teaching on using oriented films that comprise a plurality of stacked sheets wherein oriented sheets having minus values for the average coefficient of linear expansion are covered by oriented or unoriented sheets having plus values for the average coefficient of linear expansion. One of ordinary skill in the art at the time the invention was made would have readily appreciated using as the oriented films taught by Gash oriented films comprising a plurality of stacked sheets wherein an oriented sheet having minus values for the average coefficient of linear expansion is covered by an oriented or unoriented sheet having a plus value for the average coefficient of linear expansion as suggested by Ikenaga et al. in order to form laminated composites with improved dimensional stability.

Ikenaga et al. are directed to composites (including polyolefin composites) having improved dimensional stability comprising a plurality of stacked sheets wherein oriented sheets having minus values for the average coefficient of linear expansion are covered by oriented or unoriented sheets having plus values for the average coefficient of linear expansion (Column 1,

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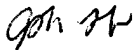
lines 20-29 and 43-68 and Column 2, lines 12-26 and 30-43 and Column 11, lines 38-30 and Column 12, lines 41-53).

Conclusion


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John L. Goff
March 6, 2003



Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700